

AMENDMENTS

IN THE CLAIMS

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1. (Currently Amended) A method for producing a coating for absorbing neutrons created in a nuclear reaction of radioactive materials, the method comprising:
 - providing a basic material forming a shielding element;
 - providing a dispersion bath whereby a dispersion of the dispersion bath comprises nickel and at least one of boron and/or compounds of boron;
 - contacting a surface to be coated of the shielding element at least partly with the dispersion in the dispersion bath thereby providing a coating wherein at least one of boron and/or compounds of boron are embedded in a nickel matrix on the contacted surface of the shielding element, wherein contacting is achieved by:
 - providing at least intermittently a relative movement between the surface to be coated of the shielding element and the dispersion bath during the contacting process; and
 - separating the shielding element from the dispersion bath.
2. (Currently Amended) The method of Claim 1, wherein the relative movement is produced by moving the element to be coated through the dispersion bath.
3. (Currently Amended) The method as set forth in Claim 1, wherein the surface to be coated is arranged face-up in a direction to the surface of the dispersion bath.
4. (Previously Amended) The method as set forth in Claim 1, wherein a dispersion bath with boron carbide is used.
5. (Previously Amended) The method as set forth in Claim 1, wherein a dispersion bath with boron in element form is used.
6. (Previously Amended) The method as set forth in Claim 1, wherein the coating is formed chemically.
7. (Previously Amended) The method as set forth in Claim 1, wherein the coating is formed electrolytically.
8. (Previously Amended) The method as set forth in Claim 1, wherein a coating 350 to 500 μm thick is produced.
9. (Previously Amended) The method as set forth in Claim 1, wherein boron or boron

carbide with more than 20% by volume is embedded in the nickel matrix.

10. (Previously Amended) The method as set forth in Claim 1, wherein boron or boron carbide with more than 40% by volume is embedded in the nickel matrix.

11. (Cancelled)

12. (Previously Amended) The method as set forth in Claim 1, wherein the method is carried out in a glass tub.

13. (Currently Amended) A shielding element having a coating for absorbing neutrons created in a nuclear reaction of radioactive materials, the coating manufactured by a method comprising:

providing a basic material forming a shielding element;

providing a dispersion bath whereby a dispersion of the dispersion bath comprises nickel and ~~at least one of~~ boron and/or compounds of boron;

contacting a surface to be coated of the shielding element at least partly with the dispersion in the dispersion bath thereby providing a coating wherein at least one of boron and/or compounds of boron are embedded in a nickel matrix on the contacted surface of the shielding element and, wherein contacting is achieved by providing at least intermittently a relative movement between the surface to be coated of the shielding element and the dispersion bath during the coating process; and

separating the shielding element from the dispersion bath; and

wherein said base material formed by an inorganic material and said coating has more than 20% by volume of boron and/or compounds of boron thereto embedded in a nickel matrix.

14. (Cancelled)

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